

PERFORMANCE TESTS

The two mixtures were tested for their usefulness as textile-pretreating agents, with the following results:

Designation	TS content [%]	Foam RM [ml] neutral	Foam continuous. method [ml]	Wetting neutral 2 g/l [s]	Wetting alkaline 2 g/l [s]	Cotton JET- bleach: CIE (whiteness)	Dilution with H ₂ O 1:1
Example 1	20	40	50	85	90	69	stable
Comparison 1	17	80	150	120	120	67	unstable

TS = dry solids content (measured with Mettler IR dryer); RM = Ross-Miles method (DIN 53902-2)

The inventive mixture shows lower values in foaming and likewise lower, i.e. superior, values in wetting, the achieved whiteness is higher, and it is dilutable with water, unlike the comparative product.

H ₂ O ₂ 50 %	2.2	2.2	2.2	ml/l
NaOH 50 %	1.7	1.7	1.7	ml/l

Results	1	2	3
CIE whiteness	67.5	66.0	67.3
Absorption in mm	37	33	34
Peroxide residue in %	14	13	15

The inventive formulation shows the best whiteness and the best absorption value, i.e. the best rewettability.

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TABLE 3

further performance tests

Formulation	Alkali stability 5 g/l of °Be-NaOH	Alkaline wetting [s]	Foam RM [ml] alkaline start/1 min
Example 2	7	142	25/5
Comparison 1	6	209	50/50
Comparison 2	1	90	50/20

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Alkaline wetting and the Ross-Miles foam test were carried out with 1.1 ml/l of the test product, with 2.2 ml/l of H₂O₂ 50%, with 2.2 ml/l of NaOH 50%.

Inventive Example 2 shows the highest alkali stability, being only exceeded by

15 Comparison 1 in alkaline wetting, and has by far the lowest foaming when tested under Ross-Miles.

WASHTEST NEUTRAL

Figure 1 shows the results of a washtest at pH 7 after 30 minutes at 50°C on EMPA soiled cotton cloth, article No. 107. Used at just 2 g/l, Inventive Example 2 provides distinctly higher lightening, i.e. cleaning, of the soiled cloth than the comparative formulations.

WASHTEST ALKALINE

Figure 2 shows the results of a washtest at pH 8.5 after 30 minutes at 50°C on EMPA soiled cotton cloth. Here too Inventive Example 2 provides distinctly higher lightening, i.e. cleaning, of the soiled cloth than the comparative formulations.

ALKALI STABILITY TEST

Figure 3 shows that here too the inventive mixture possesses the best alkali stability.